Amendments to the Specification:

Please replace paragraph [0017] with the following amended paragraph:

[0017] Referring to FIG. 1, there is shown a flow chart illustrating a method 100 for detecting phases in a computer program running at least one thread according to an embodiment of the invention. The method is performed with a system that comprises a plurality of stacks each comprising at least one stack frame. Each stack frame comprises an activation counter. In step 102 an activation count is associated with each frame. Then in step 104 the activation count is zeroed whenever the system creates a new stack frame. Next in decision 106 the system determines whether an interval has transpired during program execution. This can be done using a system clock. If the interval has not transpired the process continues until the interval transpires. Once the interval has transpired, in step 108 the program walks (i.e. examines the content of) each thread's stack and increments the activation count for each frame. At any given time, in step 110 the system associates a phase with an activation whose activation count is <u>non-zero</u>. The activation count is implemented by reserving storage in each stack frame. The method 100 can further comprise the act of logging activation counts during each interval.